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TEL (86 752) 5533798 FAX (86 752) 5533798-811

**DESCRIPTION:**

Tacusil EPA3082 *Black* is a two part unfilled epoxy encapsulant designed for medium sized castings. It cures at room temperature to a tough and flexible polymer. It has good wetting and adhesion to most surfaces and is free flowing to penetrate voids and give good air release and a smooth high gloss surface. It has very good resistance to water, acids and bases and most organic solvents. Thermal shock and cycling properties are enhanced by its high elongation giving it the ability to absorb differences in CTE's of substrates and potted components.

**TYPICAL PROPERTIES:**

All properties given are at 25 °C unless otherwise noted.

<b>Property:</b>	<b>Value:</b>	<b>Test Method or Source:</b>
<b>Color</b>	Black	Visual
<b>Mix Ratio By weight By volume</b>	Part A to Part B 1.17 to 1 1 to 1	Calculated
<b>Cure Schedule</b>	24-48 hours @ 25 °C 1 hour @65 °C 20 minutes @100 °C	
<b>Viscosity – Part A Viscosity – Part B Viscosity - Mixed</b>	5000 cps 2,000 cps 3,000 cps	Rheometer parallel plate 25mm@1/s
<b>Specific Gravity - Mixed</b>	1.06	Calculated
<b>Pot Life, defined as the time it takes for initial mixed viscosity to double</b>	1 hour	Rheometer parallel plate 25mm@1/s
<b>Glass Transition Temperature/Tg</b>	25 °C	by DSC
<b>Hardness</b>	50 Shore D	ASTM D2240
<b>Water Absorption</b>	0.66% after 24 hours	ASTM D570
<b>Tensile Properties: Strength Elongation</b>	2,400 psi 100%	ASTM D638 Extrapolated from Resinlab EP1282



# TECHNICAL DATA SHEET EPA3082 BLACK

8/09/2021

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<b>Lap Shear Strength</b> <b>0.010" bond line Al to Al</b>	1,500 psi	ASTM D1002 Extrapolated from Resinlab EP1282
<b>Surface Resistivity</b>	1.4 x 10 <sup>16</sup> ohm/sq (@ 20 %RH)	ASTM D257
<b>Volume Resistivity</b>	1.3 x 10 <sup>14</sup> ohm-cm (@ 24 °C)	Extrapolated from EP1282 Clear
<b>Dielectric Constant / Dissipation Factor</b> <b>@ 100 Hz</b>	4.1, 0.070	ASTM D150 Extrapolated from EP1282 Clear
<b>@ 100 kHz</b>	3.3, 0.040	
<b>AC Dielectric Strength</b>	770 V/mil (30.5 kV/mm)	ASTM D149 Method A, tested in oil Extrapolated from EP1282 Clear
<b>Temperature Range</b>	-40 to 150 °C**	

\* Asterisk denotes values considered typical to associated resin systems or extrapolated from other test results.

\*\*Temperature rating is based on average design requirements and is not intended as a guarantee of suitability for all applications operating at that temperature.

\*\*\* This TDS contains values that have been updated. The values reported in this technical data sheet are typical values of the product, and are highly dependent on test conditions and methodology. We actively seek the most precise and accurate ways to measure and interpret performance of our products, and to update estimated values with measured values. The formula has not been revised or changed in any way. Although the values on paper have changed, you can expect the same performance of the product.

## INSTRUCTIONS:

1. Bring both components to room temperature prior to mixing. Cartridges should be stored in a vertical position to allow any air to accumulate at the tip.
2. Cartridge format: Mixer should be attached keeping the cartridge vertical and any air pocket purged this way. After the mixer contains material, the mixer tip can be dropped to dispense pre-bleed amount. Attach a new static mixer with each cartridge, then pre-bleed the first 3 inches of dispensed material or until a uniform color is obtained. Maintain adequate velocity during dispensing to ensure complete mixing.
3. Bulk format: weigh and mix parts A and B accurately and thoroughly, scraping sides of container often. Do not pour from mixing container, transfer to a new container as residual unmixed material may cause a tacky spot on the surface of the casting. Maintain adequate velocity during dispensing to ensure complete mixing.
4. Allow to cure undisturbed until product is fully gelled or tack-free to the touch.
5. Clean up uncured resin with suitable organic solvent such as MEK, acetone or other organic solvent.

## SHELF LIFE AND STORAGE:

12 months at 25 °C  
Specialty packaging may be less.

TACUSIL MAKES NO EXPRESS OR IMPLIED WARRANTIES OR MERCHANTABILITY, FITNESS OR OTHERWISE with respect to its products. In addition, while the information contained herein is believed to be reliable, no warranty is expressed or implied regarding the accuracy of the data or the results to be obtained from the use thereof. All recommendations or suggestions for use are made without guarantee inasmuch as conditions of use are beyond our control. The properties given are typical values and are not intended for use in preparing specifications. Users should make their own test to determine the suitability of this product for their own purposes.



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Many epoxy resin systems are prone to crystallization as epoxy resin is a super-cooled fluid. This condition may give the product a gritty or grainy appearance (or hazy in clear products). Products in this state will not usually cure to normal and expected properties. In extreme cases it may appear solid and cured. Fluctuating temperatures (within 5 to 50 °C) aggravate this phenomenon. Heating the individual component to 50 to 60 °C while stirring can usually restore products to original state. Storage at 25 +/- 10 °C is optimum for most products.